

We claim:

1. An information search support system comprising:
  - ontology extracting means for, based on a service selection command from a browser, extracting an ontology corresponding to a selected service;
  - storing means for analyzing the ontology extracted by said ontology extracting means and storing into a memory a conceptual structure and details of properties corresponding to respective concepts;
  - concept window display means for calling said conceptual structure stored in said storing means and displaying it in a display area of said browser; and
  - property window display means for calling from said storing means details of a property corresponding to a concept selected from said conceptual structure displayed by said concept window display means and displaying them in a display area of said browser.
- 15 2. An information search support system according to claim 1, wherein the conceptual structure stored in said storing means is a conceptual tree structure taking a parent-child relationship into account.
3. An information search support system according to claim 1, further comprising
  - 20 relationship input window display means for displaying in a display area of said browser a relationship input window for defining relationships between two or more concepts selected from said conceptual structure displayed by said concept window display means, or relationships between two or more properties selected from properties displayed by said property window display means.
- 25 4. An information search support system according to claim 3, further comprising input confirmation window display means for displaying in a display area of said browser an input confirmation window for confirming information inputted using said concept

window display means, said property window display means and said relationship input window display means.

5. An application server comprising:

5 a vocabulary information processing mechanism for loading an ontology corresponding to a selected service and analyzing the loaded ontology to extract a conceptual structure;

10 a conceptual information display section for displaying said conceptual structure extracted by said vocabulary information processing mechanism on a browser of a user terminal via a network;

15 a property information display section for displaying on said browser property information relative to a concept selected from the conceptual structure displayed on said browser by said conceptual information display means; and

20 a relational information display section for displaying, when a plurality of concepts are selected by said conceptual information display section, relationships between the concepts on the browser.

6. An application server according to claim 5, wherein

20 said conceptual information display section displays on said browser a concept window in which a prescribed concept can be selected by tracing a tree;

25 said property information display section displays on said browser a property window displaying an item for which inputting of a property is allowed, said property window enabling inputting of a restriction condition relative to said item; and

30 said relational information display section displays on said browser a relationship input window that enables inputting of a relationship between said concepts and/or a relationship between properties selected by said property information display section.

7. An application server according to claim 5, further comprising an inference processing mechanism for executing an inference operation based on an axiom rule and extending/parsing vocabulary information extracted by said vocabulary information processing mechanism.

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8. An application server according to claim 5, further comprising a search request transmitting section for transmitting to a search system a prescribed search request based on a search request made relative to said windows displayed on said browser by said conceptual information display section, said property information display section and said 10 relational information display section.

9. An application server according to claim 5, further comprising an ontology search portal for calling a service selection menu list based on access made from said browser in said user terminal, displaying said service selection menu on said browser, and 15 accessing an ontology server offering said ontology based on service selection from said browser.

10. An information search method comprising the steps of:  
receiving a selection command of a service from a browser;  
20 extracting an ontology corresponding to said service for which the selection command is received;

analyzing said extracted ontology and storing into a memory details of a conceptual structure and details of properties corresponding to respective concepts;  
calling said conceptual structure stored in said memory and displaying it in a 25 display area of said browser;

calling from said memory details of properties corresponding to concepts selected from said displayed conceptual structure and displaying them in a display area of said browser; and

displaying in a display area of said browser relational information defining relationships between said selected concepts and/or relationships between said properties.

11. An information search method according to claim 10, further comprising the  
5 steps of:

receiving an input from said browser relative to said conceptual structure, said details of the properties and said relational information displayed in said display areas; and transmitting a search request based on said received input.

10 12. An information search method according to claim 11, wherein the step of transmitting said search request transmits said search request to a search system on the Semantic Web.

15 13. An information search method according to claim 10, further comprising the step of extending/compressing vocabularies using an inference engine relative to the concepts selected from said conceptual structure.

20 14. An information search method for conducting an information search by displaying a search window on a browser of a user terminal, said method comprising the steps of:

displaying on said browser a conceptual structure based on an analysis of an ontology performed relative to service selection from said browser;

displaying on said browser details of a property relative to a concept selected from said conceptual structure displayed on said browser; and

25 displaying, when a plurality of concepts are selected, relationships between the selected concepts on said browser.

15. An information search method according to claim 14, further comprising the

step of displaying, when a plurality of properties are inputted from said details of the property displayed on said browser, a window defining relationships between said properties on said browser.

5 16. An information search method according to claim 14, further comprising the step of displaying on said browser an input confirmation window for confirming information inputted using respective display windows displayed on said browser.

17. A program product for causing a computer to have:  
10 a function of loading an ontology corresponding to a service selected from a user terminal;  
a function of analyzing said loaded ontology to extract a conceptual structure;  
a function of storing into a memory said extracted conceptual structure, details of properties corresponding to respective concepts, and a relational structure definable  
15 between the concepts;  
a function of calling said conceptual structure stored in said memory and displaying it on a browser of said user terminal via a network;  
a function of reading from said memory details of properties relative to concepts selected from said conceptual structure displayed on said browser and displaying  
20 said details of the properties on said browser via the network; and  
a function of calling from said memory a relational structure in said selected concepts and displaying it on said browser via the network.

18. A program product according to claim 17, further causing the computer to  
25 have:  
a function of receiving an input from said browser relative to said conceptual structure, said details of the properties and said relational structure displayed on said browser; and

a function of transmitting a search request to a search system based on said received input.

19. A program product according to claim 17, further causing the computer to  
5 have:

a function of extending/compressing vocabularies using an inference engine relative to the concepts selected from said conceptual structure.